Biographies of Phasmatologists – 9. Morgan Hebard.

P.E. Bragg, 8 The Lane, Awsworth, Nottinghamshire, NG16 2QP, U.K. Email: pbragg@aol.com

Abstract

Morgan Hebard (1887-1946) came from a very wealthy American family and was able to devote his life to the study of Orthoptera. He built up a huge collection of orthopteroid insects at the Academy of Natural Sciences of Philadelphia. He described over 800 new species of orthopteroids; this included 44 new species, and ten new genera of phasmids. His life and phasmid work is outlined.

Key words

Phasmida, Phasmatologist, Morgan Hebard, Biography, Academy of Natural Sciences of Philadelphia.

Morgan Hebard (1887-1946)

Morgan Hebard was born on 23rd February 1887 in Cleveland, Ohio, USA. His forename came from his maternal grandfather, David Morgan, a Welshman who emigrated to the USA as a young man and made his fortune in the iron and steel industry. His father, Charles Samuel Hebard, came from a wealthy, well-connected American family and had a Congressman as a grandfather; the family fortune was grounded in the lumber trade.

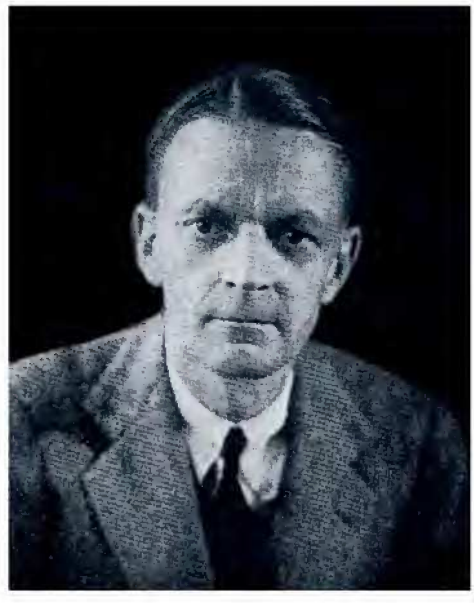


Figure 1. Morgan Hebard.

His early interest in entomology was Lepidoptera, an interest that developed as he encountered different species in various parts of the country. The family had their main home in Philadelphia, but also had a winter home in Georgia, and a summer home in Michigan; in addition they spent several weeks per year in Florida. He was privately tutored until the age of 17 when he went to Asheville School in North Carolina, followed by Yale University from where he graduated in 1910.

He first met James Abram Garfield Rehn in 1903 when he was identifying some of his Lepidoptera at Philadelphia Museum; at the time Rehn was a student working on Orthoptera in the museum. Encouraged by Rehn, Hebard developed an interest in Orthoptera (including cockroaches, mantids, and phasmids) and Dermaptera and they wrote their first joint paper on Orthoptera that they found in Georgia and Florida (Rehn & Hebard, 1905).

After graduating from Yale, Hebard worked in the banking industry for a year; thereafter he devoted his time to entomology. Hebard and Rehn had a long-term aim of producing a monograph of North American Orthoptera. To this end Hebard financed fifteen years of field trips lasting from six weeks to three months for himself and Rehn, they amassed over 100,000 specimens of Orthoptera. In addition they made trips to Jamaica, Panama and Colombia; Hebard also visited Cuba and the Bahamas, and in his University vacations he had twice visited Europe. From the outset Hebard was developing the Hebard Collection, which was maintained in the Philadelphia Museum and was formally transferred to the museum in 1945. To supplement his own collecting Hebard purchased collections of material from many parts of the world, particularly Central and South America, and one particularly large collection from the Philippines.

At Yale Hebard was in the shotgun team, and was also said to be a good shot with both rifle and revolver. In 1913 Hebard married Margaret Claxton and they had two sons and a daughter. In the First World War he became a lieutenant in the Signal Corps and later

transferred to Military Intelligence, all his time in the army was served in the USA. In his 40s Hebard developed severe arthritis that restricted his movement and limited his entomological work. He was Curator of Insects at the Academy of Natural Sciences of Philadelphia for several years but did not accept any payment for the post.

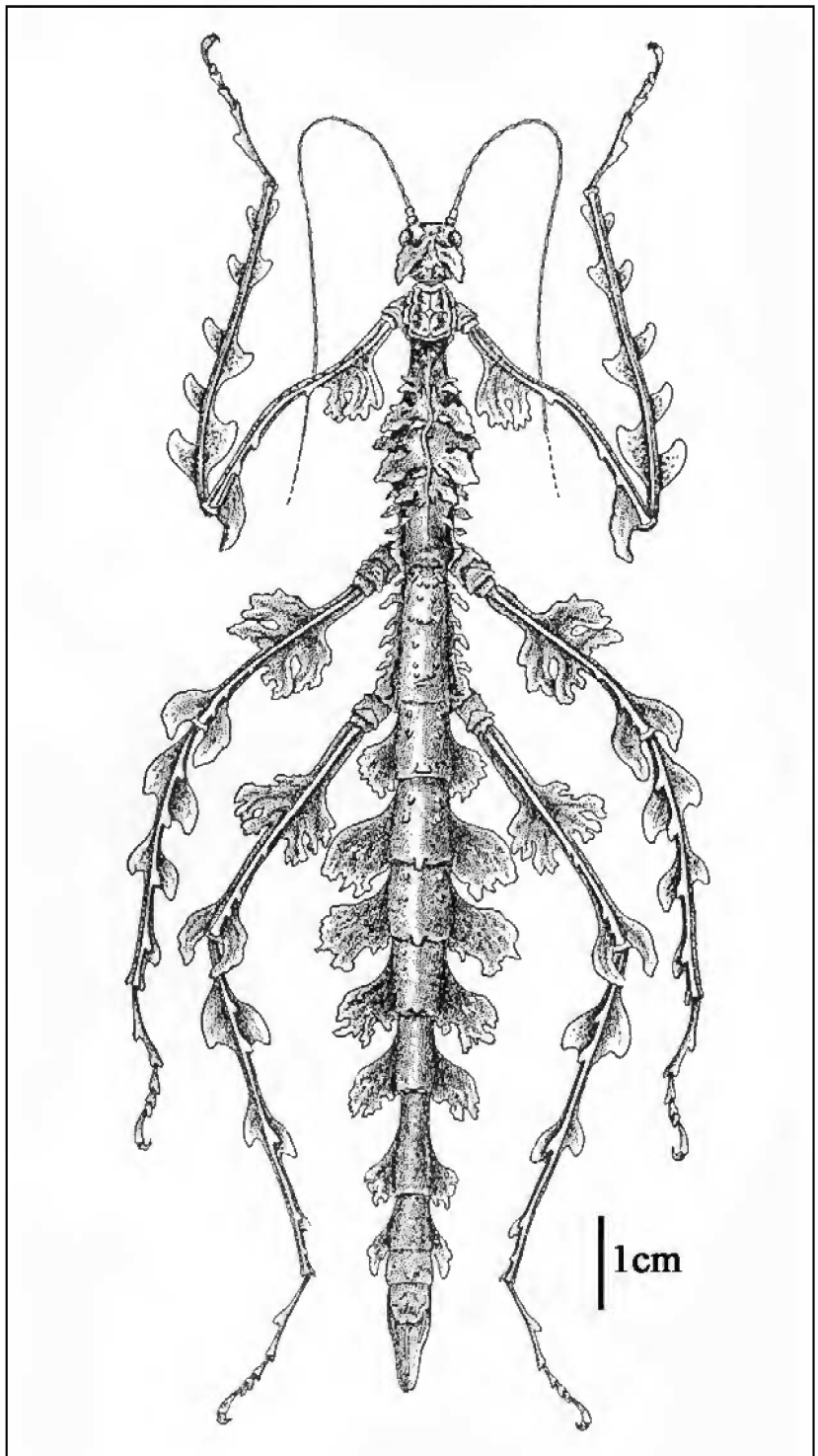


Figure 2. *Trychopeplus thaumasius* Hebard, 1924. From Hebard's plate 6 figure 8.

Hebard wrote 197 papers on Orthoptera and Dermaptera, either on his own or with Rehn. The publications listed at the end of this biography are restricted to papers that deal

with phasmids or are specifically mentioned for other reasons; some publications that only record known species from a new area have been omitted.

Hebard was particularly interested in cockroaches, but also did work on other orthopteroids from many parts of the world. The Hebard Collection of Orthoptera grew to about 250,000 specimens by the time he formally transferred it to the Academy of Natural Sciences of Philadelphia in 1945. It filled 2400 cabinet drawers and included over 3000 type specimens of species he had either described, or purchased from other collections, or exchanged.

Morgan Hebard died at the age of 59 in Philadelphia from a heart attack on 28th December 1946. An extensive obituary was published by his friend and colleague J.A.G. Rehn (1948).

Genera and species named after Hebard

Morgan Hebard was involved in the descriptions of about 800 species of orthopteroids, so it is not surprising that 40 orthopteroid species have been named after him; but only one is a phasmid. The following list gives an idea of the scope of these names.

Phasmid: *Ilocano hebardi* Rehn & Rehn, 1938.

Mantids: Three species, and two genera: *Hebardia* Werner, 1921 & *Hebardiella* Werner, 1924.

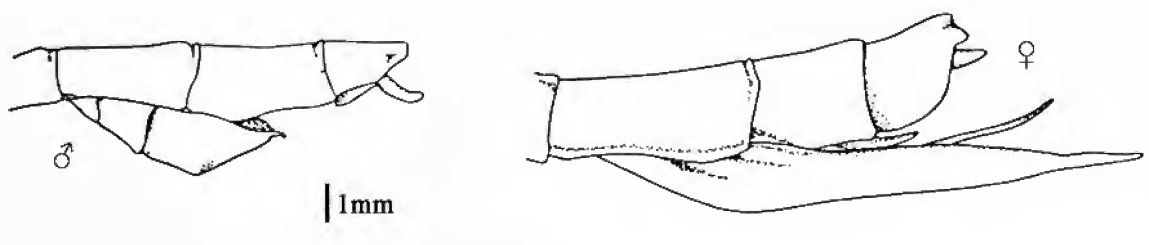
Cockroaches: Eight species, and four genera: *Hebardina* Bei-Bienko, 1938, *Hebardula* Uvarov, 1939, *Euhebardula* Princis, 1953 (a replacement name for *Hebardula* Princis, 1950).

Orthoptera: 28 species, three genera: *Hebardacris* Rehn, 1952, *Hebardiniella* Chopard, 1932, (emendation of *Hebardinella* Chopard, 1932), *Hebarditettix* Günther, 1938.

Phasmid work

Hebard described 44 new species on his own and nine as co-author with J.A.G. Rehn. He described six new genera on his own and four as co-author with Rehn. Although he worked on Orthoptera from many parts of the world, all his new species of phasmids are from North, Central, or South America.

In his first paper to deal with phasmids Hebard was highly critical of Brunner (1907) & Redtenbacher's (1906 & 1908) work: "It is indeed deplorable that, with so many species before them, these authors have made virtually no effort to study and discuss these problems in a scholarly and scientific manner" (Hebard, 1919: 158); "As a whole, we can definitely state that the *Insektenfamilie der Phasmiden* is the greatest retrograde step made in recent years, away from true scientific study of the order Orthoptera" (Hebard, 1919: 159). He later remarks "It did not seem possible that so pretentious a work ....., could actually be so carelessly executed, superficial and unsatisfactory" (Hebard, 1919: 162).



Figures 3 & 4. *Pseudobacteria pastazae* Hebard, 1924. Modified from Hebard's plate 7, figures 1 &2. The original illustrations were scaled as 3x life size.

Hebard also criticises the scarcity of illustrations in Brunner & Redtenbacher's monograph. All but two of the new species described by Hebard were illustrated (the exceptions: *Dyme carrikeri* Hebard, 1919 and *Anisomorpha monstrosa* Hebard, 1932). However, many of Hebard's illustrations consist of only one view of the apex of the abdomen; as such, they are useful for distinguishing species, but only when one has already decided to which genus the specimen belongs. For *Isogoras chocoensis* Hebard, 1921 the only illustration is a single fore-wing (fig 5). His illustrations were usually printed with the size indicated in the caption e.g. "life size", or "3x" etc. (figs 3 & 4), or occasionally "much enlarged" (fig 7). Where I have reproduced examples of his illustrations in this paper I have added scale lines to those for which he gave a precise magnification.

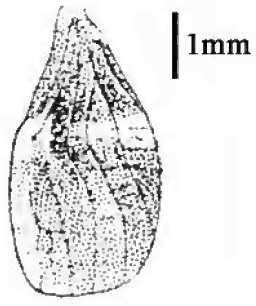


Figure 5.
Isogoras chocoensis Hebard, 1921

Hebard's work is a significant and valuable contribution to our knowledge of New World phasmids.

Lists of genera, species and subspecies described by Hebard

New genera (in alphabetical order)

Acanthometriotes .....Hebard, 1924: 139.
Aploploides.....Rehn & Hebard, 1938: 49.
Brachyelena .....Hebard, 1933**a**: 31.
Ceratites .....Rehn & Hebard, 1909: 126.
Holcoides .....Hebard, 1919: 148.
Libethroidea .....Hebard, 1919: 170.
Litosermyle .....Hebard, 1919: 171.
Manomera .....Rehn & Hebard, 1907: 283.
Pseudoceroys .....Hebard, 1922**b**: 354.
Rhabdoceratites .....Rehn & Hebard, 1912**a**: 232.

New species described by Hebard alone

Hebard, 1919

apolinari (Bacteria) ..... 161, pl. 19.10, 19.11.
atrata (Anisomorpha) .....145, pl. 20.6.
carrikeri (Acanthoclonia) ..... 143, pl. 20.4 & 20.5.
carrikeri (Dyme) ..... 174.
colombiae (Bostra) ..... 159, pl. 22.5 & 22.6.
cortex (Planudes) .....155, pl. 22.2, 22.3 & 22.4.
eupeplum (Pseudophasma) .....152, pl. 22.1.
forceps (Holcoides) ..... 148, pl. 21.2, 21.3 & 21.4.
insalubris (Libethra) .....166, pl. 23.3.
inusitata (Libethroidea) ..... 170, pl. 23.7 & 23.8.
ocanae (Litosermyle) ..... 172, pl. 23.9 & 23.10.
robustum (Pseudophasma) .....151, pl. 21.6.
spinicollis (Libethra) ..... 164, pl. 23.1 & 23.2.
strangulata (Acanthoclonia) ..141, pl. 20.1, 20.2 & 20.
taeniatum (Pseudophasma) .....150, pl. 21.5.
viridis (Stratocles) .....146, pl. 21.1.

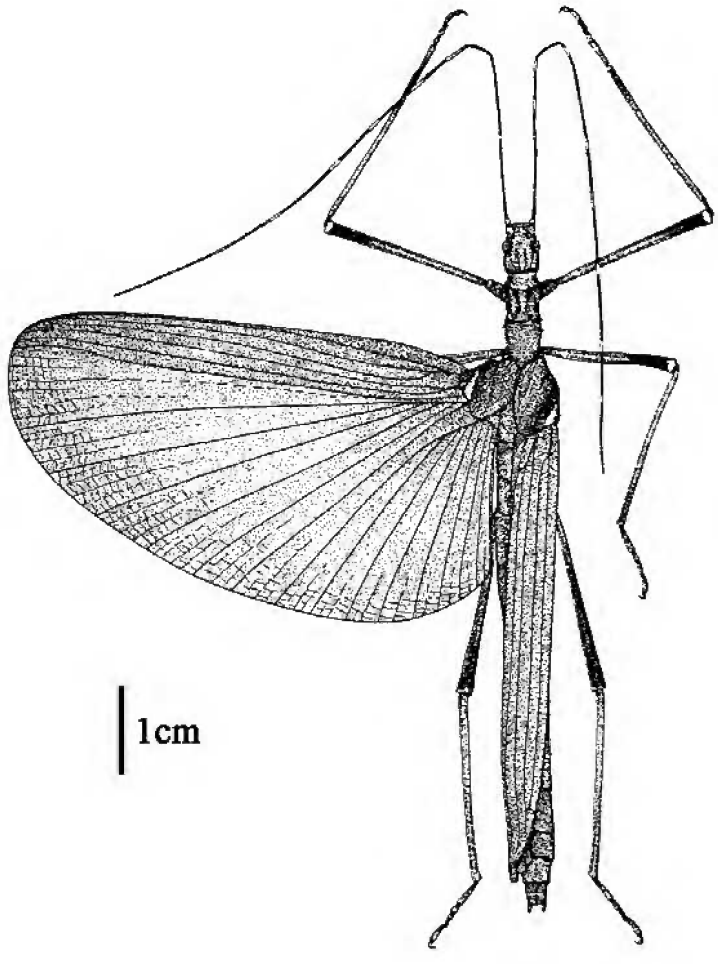


Figure 6. *Pseudophasma eupeplum* Hebard 1919, taken from plate 22 figure 1.

Hebard, 1920
chumash (Timema) .....130, figs 2.

Hebard, 1921
chocoensis (Isagoras) .....164, pl. 9.27.

Hebard, 1922a
erythropleura (Diapheromera) ..... 192, pl. 7.12-14

Hebard, 1922b
annulicornis (Brizoides) ..... 348, pl. 14.1 & 14.2.
ariadne (Prisopus) ..... 352, pl. 14.3-8.
harroweri (Pseudoceroys) ..... 355, pl. 15.1& 15.2.
panamae (Libethra) .....356, pl. 14.9 & 15.3-4.

Hebard, 1924
annulicornis (Dyme) ..... 145, pl. 6.6 & 6.7.
camposi (Libethra) ..... 143, pl. 6.3-5.
crassus (Acanthometriotes) .....139, pl. 5.17.
esmeraldas (Pseudophasma) ..... 136, pl. 5.15 & 5.15.
infumata (Holca) .....135, pl. 5.13.
pastazae (Pseudobacteria) ..... 150, pl. 7.1-3.
spicatus (Paraprisopus) .....141, pl. 6.1.
thaumasius (Trychopeplus) ..... 148, pl. 6.8 & 6.9.

Hebard, 1932
monstrosa (Anisomorpha) .....214.
oaxacae (Heteronemia) ..... 217, pl. 17.1-3.

Hebard, 1933a
apolinari (Isagoras) ..... 37, pl. 2.10-11.
chopardi (Isagoras) .....37, pl. 2.13.
ecuadoricus (Isagoras) .....37, pl. 2.12.
flavidum (Pseudophasma) .....33, pl. 2.9.
hirsuta (Brachyelena) .....32, pl. 2.8.
metae (Libethra) .....39, pl. 3.3.
straminea (Libethra) .....38, pl. 3.2.

Hebard, 1933b
magnifica (Dyme) ..... 123, pl. 6.7 & 6.8.

Hebard, 1934
torquata (Diapheromera) ..... 281, pl. 20.1-3.
hesperus (Parabacillus) ..... 286, pl. 20.5-6.

Hebard, 1937
ritensis (Timema) .....349, pl. 21.1.
velii eucnemis (Diapheromera) [ssp.] ... 350, pl. 22.1-2.

Rehn & Hebard, 1909
covilleae (Diapheromera) ..... 126, fig. 5.
tenuis (Pseudosermyle) ..... 121, figs. 2-4.

Rehn & Hebard, 1914
brachypyga (Manomera) ..... 385, fig. 2 & 4.

Rehn & Hebard, 1938
stenocephalum (Aploploides) ..... 49, pl. 4.18-21.
annulipes (Clonistria) ..... 47, pl. 3.12 & 3.13.
bicoloripes (Clonistria) ..... 43, pl. 3.7, 3.8 & 3.9.
latebricola (Clonistria) ..... 42, pl. 3.5 & 3.6.
monticola (Clonistria) ..... 45, pl. 3.10 & 3.11.
dominicae (Lamponius) ..... 38, pl. 3.3 & 3.4.

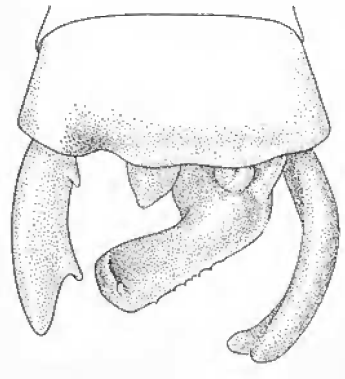


Figure 7.
Timema ritensis Hebard, 1937 plate 21 figure1 – scale given by Hebard as "much enlarged".

Figure 8. PSG 122, *Anisomorpha monstrosa* Hebard, 1932.

Species in culture

Two species described by Hebard are listed on the Phasmid Study Group's culture list. One of these, PSG 98 *Parabacillus hesperus* Hebard, 1934 has not been in culture for many years; it may never have been in culture: in the early days of the PSG species were allocated a number when they were being maintained in captivity, before it was known if they would breed successfully. The other culture is PSG 122, *Anisomorpha monstrosa* Hebard, 1932; this is a junior synonym of *Anisomorpha paromalus* (Westwood, 1859) but it was being reared under Hebard's name for several years before the synonym was recognised.

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